

General

Title

Diagnostic imaging: percentage of all computed tomography colonography (CTC) exams, either screening or diagnostic, with a clinically significant extracolonic finding, not otherwise known based on the history provided or based on a prior imaging procedure at the institution.

Source(s)

American College of Radiology (ACR). National Radiology Data Registry: qualified clinical data registry. Non-PQRS measures. Reston (VA): American College of Radiology (ACR); 2015 Mar. 49 p.

Measure Domain

Primary Measure Domain

Related Health Care Delivery Measures: User-enrollee Health State

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of all computed tomography colonography (CTC) exams, either screening or diagnostic, with a clinically significant extracolonic finding, not otherwise known based on the history provided or based on a prior imaging procedure at the institution.

Rationale

Colorectal cancer is a leading cause of mortality. Early detection programs provide an opportunity to save many lives. Computed tomography (CT) colonography permits a minimally invasive, low-risk evaluation for cancerous polyps. Studies have shown that CT colonography is effective in screening patients with average risk of cancer.

Observational studies have shown that CT colonography commonly detects extracolonic findings that can be considered clinically important when applied to an asymptomatic screening population.

In imaging examinations such as CT colonography, incidental findings outside of the primary indication for the exam may be detected. Evaluation of extracolonic findings must be handled judiciously, taking into consideration cost associated with additional work up, along with patient status. A high percentage of extracolonic findings could indicate unnecessary follow up for the patient. This measure provides comparative feedback as to the frequency of follow up.

Evidence for Rationale

American College of Radiology (ACR). National Radiology Data Registry: qualified clinical data registry. Non-PQRS measures. Reston (VA): American College of Radiology (ACR); 2015 Mar. 49 p.

Gluecker TM, Johnson CD, Wilson LA, MacCarty RL, Welch TJ, Vanness DJ, Ahlquist DA. Extracolonic findings at CT colonography: evaluation of prevalence and cost in a screening population. *Gastroenterology*. 2003 Apr;124(4):911-6. [PubMed](#)

Hassan C, Pickhardt P, Laghi A, Kim D, Zullo A, Iafrate F, Di Giulio L, Morini S. Computed tomographic colonography to screen for colorectal cancer, extracolonic cancer, and aortic aneurysm: model simulation with cost-effectiveness analysis. *Arch Intern Med*. 2008 Apr 14;168(7):696-705. [58 references] [PubMed](#)

Macari M, Nevsky G, Bonavita J, Kim DC, Megibow AJ, Babb JS. CT colonography in senior versus nonsenior patients: extracolonic findings, recommendations for additional imaging, and polyp prevalence. *Radiology*. 2011 Jun;259(3):767-74. [PubMed](#)

O'Connor SD, Pickhardt PJ, Kim DH, Oliva MR, Silverman SG. Incidental finding of renal masses at unenhanced CT: prevalence and analysis of features for guiding management. *AJR Am J Roentgenol*. 2011 Jul;197(1):139-45. [PubMed](#)

Pickhardt PJ, Hanson ME, Vanness DJ, Lo JY, Kim DH, Taylor AJ, Winter TC, Hinshaw JL. Unsuspected extracolonic findings at screening CT colonography: clinical and economic impact. *Radiology*. 2008 Oct;249(1):151-9. [PubMed](#)

Pickhardt PJ, Hanson ME. Incidental adnexal masses detected at low-dose unenhanced CT in asymptomatic women age 50 and older: implications for clinical management and ovarian cancer screening. *Radiology*. 2010 Oct;257(1):144-50. [PubMed](#)

Pickhardt PJ, Kim DH, Meiners RJ, Wyatt KS, Hanson ME, Barlow DS, Cullen PA, Remtulla RA, Cash BD. Colorectal and extracolonic cancers detected at screening CT colonography in 10,286 asymptomatic adults. *Radiology*. 2010 Apr;255(1):83-8.

Pickhardt PJ, Lee LJ, del Rio AM, Lauder T, Bruce RJ, Summers RM, Pooler BD, Binkley N. Simultaneous screening for osteoporosis at CT colonography: bone mineral density assessment using MDCT attenuation techniques compared with the DXA reference standard. *J Bone Miner Res*. 2011 Sep;26(9):2194-203. [PubMed](#)

Pickhardt PJ, Pooler BD, Lauder T, del Rio AM, Bruce RJ, Binkley N. Opportunistic screening for osteoporosis using abdominal computed tomography scans obtained for other indications. *Ann Intern Med*. 2013 Apr 16;158(8):588-95. [PubMed](#)

Summers RM, Baecher N, Yao J, Liu J, Pickhardt PJ, Choi JR, Hill S. Feasibility of simultaneous computed tomographic colonography and fully automated bone mineral densitometry in a single examination. *J Comput Assist Tomogr*. 2011 Mar-Apr;35(2):212-6. [PubMed](#)

Summers RM, Liu J, Sussman DL, Dwyer AJ, Rehani B, Pickhardt PJ, Choi JR, Yao J. Association between visceral adiposity and colorectal polyps on CT colonography. *AJR Am J Roentgenol*. 2012 Jul;199(1):48-57. [PubMed](#)

Veerappan GR, Ally MR, Choi JH, Pak JS, Maydonovitch C, Wong RK. Extracolonic findings on CT colonography increases yield of colorectal cancer screening. *AJR Am J Roentgenol*. 2010 Sep;195(3):677-86. [PubMed](#)

Yee J, Sadda S, Aslam R, Yeh B. Extracolonic findings at CT colonography. *Gastrointest Endosc Clin North Am*. 2010 Apr;20(2):305-22. [PubMed](#)

Primary Health Components

Computed tomography colonography (CTC); clinically significant extracolonic finding

Denominator Description

All computed tomography colonography (CTC) exams, either screening or diagnostic

Numerator Description

Number of exams with a clinically significant extracolonic finding, not otherwise known based on the history provided or based on a prior imaging procedure at the institution (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

The measures in this set are being made available without any prior formal testing. However, these measures are included in the Centers for Medicare and Medicaid Services (CMS) approved American College of Radiology (ACR) National Radiology Data Registry, a CMS Physician Quality Reporting System (PQRS) Qualified Clinical Data Registry since 2014.

The ACR recognizes the importance of thorough testing all of its measures and encourages ongoing robust testing of the ACR National Radiology Data Registry measurement set for feasibility and reliability by organizations or individuals positioned to do so. The ACR will welcome the opportunity to promote such testing of these measures and to ensure that any results available from testing are used to refine

the measures on an ongoing basis. Since these measures are in use for quality improvement and reporting, we can support data analysis of registry data to perform the testing, such as evaluation of gaps for validity testing, and signal-to-noise estimation for reliability testing.

Evidence for Extent of Measure Testing

Blakey A. (Administrator, Quality Management Programs, American College of Radiology, Reston, VA). Personal communication. 2016 Mar 7. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Ambulatory Procedure/Imaging Center

Hospital Inpatient

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Individual Clinicians or Public Health Professionals

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Not within an IOM Domain

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Diagnostic Evaluation

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

All computed tomography colonography (CTC) exams, either screening or diagnostic

Exclusions

None

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of exams with a clinically significant extracolonic finding, not otherwise known based on the history provided or based on a prior imaging procedure at the institution

Note: The *American College of Radiology (ACR) Practice Guideline for the Performance of Computed Tomography (CT) Colonography in Adults* recommends the use of a CT Colonography Reporting and Data System (C-RADS) to document clinically significant extracolonic findings. According to C-RADS, a clinically significant extracolonic finding would be a rating of E3 or E4 for extracolonic findings.

Exclusions

Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

Registry data

Type of Health State

Clinically Diagnosed Condition

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Does not apply to this measure (i.e., there is no pre-defined preference for the measure score)

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

CT colonography clinically significant extracolonic findings.

Measure Collection Name

National Radiology Data Registry Measurement Set

Submitter

American College of Radiology - Medical Specialty Society

Developer

American College of Radiology - Medical Specialty Society

Funding Source(s)

None

Composition of the Group that Developed the Measure

The American College of Radiology (ACR) National Radiology Data Registry (NRDR) helps facilities benchmark outcomes and process-of-care measures and to develop quality improvement programs. The composition of the workgroup is has representation from each of our six data registries:

- CT Colonography Registry Committee (CTC)
- Dose Index Registry Committee (DIR)
- General Radiology Improvement Database Committee (GRID)
- National Mammography Database Committee (NMD)
- Lung Cancer Screening Registry Committee (LCSR)
- IR & INR Registries (Interventional Radiology)

Committee Members

- Morin Richard, PhD, FACR, Chair of NRDR
- Kalpana Kanal, PhD, Chair of DIR
- Zuley Margarita, MD, Chair of NMD
- Abe Dachman, MD, Chair of CTC Committee
- Frank Rybicki, MD, Chair of Metrics Committee
- Siegel Eliot, MD, RSNA Liaison
- Chad Calendine, MD, Co-Chair of GRID
- Geoffrey Wiot, Co-Chair of GRID
- Jeremy Durack, Chair of IR Registry Committee
- Ella Kazerooni, Co-Chair of Lung-Cancer Screening Committee

Deni Aberle, Co-Chair of Lung-Cancer Screening Committee

Committee Staff

Judy Burleson, MHSA, American College of Radiology

Mythreyi Bhargavan Chatfield, PhD, American College of Radiology

Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Mar

Measure Maintenance

This measure is reviewed annually

Date of Next Anticipated Revision

2017 Mar

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in March 2017.

Measure Availability

Source available from the [American College of Radiology \(ACR\) Web site](#) .

For more information, contact ACR at 1891 Preston White Drive, Reston, VA 20191; Phone: 703-648-8900;
E-mail: nrdrr@acr.org; Web site: www.acr.org .

NQMC Status

This NQMC measure summary was completed by ECRI Institute on December 11, 2015. The information was verified by the measure developer on March 7, 2016.

The information was reaffirmed by the measure developer on March 3, 2017.

Copyright Statement

This NQMC summary is based on the original measure, which is subject to the measure developer's copyright restrictions.

Production

Source(s)

American College of Radiology (ACR). National Radiology Data Registry: qualified clinical data registry. Non-PQRS measures. Reston (VA): American College of Radiology (ACR); 2015 Mar. 49 p.

Disclaimer

NQMC Disclaimer

The National Quality Measures Clearinghouse[®] (NQMC) does not develop, produce, approve, or endorse the measures represented on this site.

All measures summarized by NQMC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public and private organizations, other government agencies, health care organizations or plans, individuals, and similar entities.

Measures represented on the NQMC Web site are submitted by measure developers, and are screened solely to determine that they meet the [NQMC Inclusion Criteria](#).

NQMC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or its reliability and/or validity of the quality measures and related materials represented on this site. Moreover, the views and opinions of developers or authors of measures represented on this site do not necessarily state or reflect those of NQMC, AHRQ, or its contractor, ECRI Institute, and inclusion or hosting of measures in NQMC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding measure content are directed to contact the measure developer.